THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOSHIKAZU HORI

Appeal No. 1997-4190
Application No. 08/221,721

ON BRIEF

Before KRASS, JERRY SMITH, and DIXON, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 6 and 8 through 20, all of the claims pending in the application.

The invention is directed to a full frame electronic shutter camera best illustrated by reference to representative independent claim 1, reproduced as follows:

1. An electronic shutter camera with full frame resolution, said camera comprising:

a progressive scanning interline transfer charge coupled device (CCD) for imaging a frame of information;

timing means for generating electronic shutter signals for controlling the scanning and charge transfer rate for said CCD;

sync generator means for generating video timing signals;

control means for resetting said timing means and said sync generator means, said control means including means for selecting an internal reset mode and an external reset mode of operation for said timing means and said sync generator means, said control means further including means responsive to an externally supplied asynchronous reset signal for resetting said timing means and said sync generator means;

digital image generating means coupled to said CCD for generating multiple bit digital image signals;

individual memory means coupled to said digital image generating means for storing a full frame multi-bit digital image; and

means for converting said full frame multi-bit digital image to video signals having a selected format.

The examiner relies on the following references:

Nishizawa et al. (Nishizawa)	4,531,156	Jul. 23, 1985
Yang et al. (Yang)	4,851,915	Jul. 25, 1989
Hunt et al. (Hunt)	4,896,211	Jan. 23, 1990
Nagasaki et al. (Nagasaki)	5,153,730	Oct. 06, 1992
Kokubo	5,298,734	Mar. 29, 1994

Claims 1 through 6 and 8 through 20 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites Kokubo, Hunt and Nagasaki with regard to claims 1 through 3, 5, 6 and 8 through 12, adding Yang to this combination with regard to claim 4. The examiner applies Kokubo, Hunt and Yang against claims 13 through 20. In new grounds of rejection entered in the answer, the examiner cites Kokubo, Hunt, Nagasaki, Yang and Nishizawa with regard to claims 4 and 16 through 20 and Kokubo, Hunt, Yang and Nishizawa with regard to claims 13 through 15.

An earlier rejection under 35 U.S.C. § 112, second paragraph, was withdrawn by the examiner in the answer in response to an amendment after final.

Reference is made to the briefs and answers for the respective positions of appellant and the examiner.

OPINION

At the outset, we note that, in accordance with appellant's grouping of the claims at page 8 of the principal brief, the following claims stand or fall together within each delineated group: Group I: 1-3, 5, 6, 8-11; Group II: 12; Group III: 13-15; Group IV: 16-20. Thus, for purposes of this appeal, we need look at only independent claims 1, 12 and 13 and dependent claim 16.

We turn first to the rejection of independent claim 1. It is the examiner's position that Kokubo discloses an electronic shutter camera with full frame resolution comprising a scanning interline transfer charge coupled device (CCD) for imaging a frame of information (column 4, line 12); a timing means for generating electronic shutter signals for controlling the scanning and charge transfer rate for the CCD (column 3, lines 13-21); a sync generator means (7) for

generating video timing signals; a memory means coupled to the CCD (column 2, lines 66-67 and Figure 2, item ST) for storing a full frame image from the CCD; and a means for converting the full frame image to video signals having a selected format (column 4, lines 31-34).

The examiner recognizes that Kokubo does not disclose the claimed control means, the claimed digital image generating means or the individual memory means coupled to the digital image generating means for storing a multi-bit digital image. However, it is the examiner's position that Hunt supplies all of the deficiencies of Kobuko and that it would have been obvious to combine the two teachings. More specifically, it is the examiner's position that Hunt discloses a control means for externally controlling the camera wherein the control means resets the timing and sync generator means (column 2, lines 6-18); that Hunt discloses a means for selecting an internal reset mode and an external reset mode of operation (column 7, lines 1-5) and that the control means of Hunt includes a means responsive to an externally supplied asynchronous reset signal for resetting the timing and sync generator means (column 3, lines 11-14). The examiner also

argues that Hunt has a digital image generating means which is coupled to the CCD for generating multiple bit digital image signals

> "since signals from the CCD are able to be digitized by the digital image generating means. Furthermore, a memory for storing the digital signal is clearly present in Hunt...since the digitized image is subjected to 'digital signal processing'(Column 3, Line 48-49), an operation clearly requiring that the digitized image data be stored in some fashion in order
> for it to be made available for the subsequent digital processing operation" [Principal answer-page 6].

Nagasaki is employed by the examiner for the teaching of incorporating into a photographing unit a digitizing means and an individual memory means for storing a full-frame multi-bit digital image because Hunt's digitizing and memory elements are housed in a separate enclosure and therefore not part of the photographing unit itself.

We find that the examiner has not established a prima facie case of obviousness with regard to the instant claimed subject matter and, so, we will not sustain any of the outstanding rejections under 35 U.S.C. § 103.

While there are many arguments addressed in the three briefs and two answers and there are many claim limitations which might be addressed by us, we will address just two of the instant claim limitations which are exemplary of the deficiencies of the applied references.

Each of the claims requires a control means for resetting the timing means and the sync generator means. Independent claims 1 and 13 are even more specific in reciting that the control means includes means responsive to an externally supplied asynchronous reset signal for resetting both the timing means and the sync generator means. Claim 1 also includes means for selecting an internal reset mode and an external reset mode.

As appellant points out [top of page 12 of the principal brief], Hunt discloses only that a timing means is responsive to an externally supplied asynchronous reset signal. However, the sync generator means, 62, is not coupled to the externally supplied reset signal. From Hunt's description and Figures 1A and 1B, appellant appears to be correct since Hunt never describes the sync generator means, 62, as being responsive to an externally supplied asynchronous reset signal and we find

no suggestion that the skilled artisan would make the sync generator means responsive thereto. The examiner counters by contending, in the principal answer, page 28, that it is not sync generator means, 62, in Hunt on which the examiner relies for the teaching of the claimed "sync generator means," but, rather, the examiner identifies the multi-normal pulse pattern generator, element 74-MNPPG, of Hunt as the claimed sync generator means.

While appellant has not responded to this argument of the examiner, even though two further reply briefs were filed, the examiner has not convinced us that the MNPPG of Hunt constitutes the claimed sync generator means. The examiner contends that MNPPG of Hunt supplies both the timing and sync signals for control of the CCD, pointing to column 7, lines 12-20 and lines 39-44. However, our review of those sections of Hunt, directed to an asynchronous trigger mode and the passing of MNPPG signals to vertical line drivers and the generation of clock signals via the MNPPG, reveals nothing suggestive of the claimed control means for resetting both the timing means and the sync generator means wherein the timing means generates electronic shutter signals and the sync

generator means generates video timing signals. While there appears to be an external reset signal in Hunt, the examiner has not persuaded us that this external reset signal resets *both* the timing means and a sync generator means, as claimed. In fact, the examiner leaves it unclear as to why it is believed that the MNPPG of Hunt provides the claimed sync generator means.

The examiner also apparently relies on mode select, 94, of Hunt for providing the claimed "means for selecting an internal reset mode and an external reset mode of operation for said timing means and said sync generator means." Yet, it is not clear, from either the disclosure of Hunt or the examiner's rationale, why Hunt's mode select, 94, is thought to have the claimed capability.

Independent claims 1 and 12 also require a "digital image generating means coupled to said CCD for generating multiple bit digital image signals." We agree with appellant that neither Kokubo nor Hunt appears to disclose or suggest such a generating means. The examiner agrees that Kokubo fails to teach this limitation but contends that Hunt, while not explicit, *must* have such a digital image generating means

because a digital memory is present and Hunt digitizes image data which is then processed and analyzed, pointing to column 3, lines 46-56 of Hunt. Reference to that portion of Hunt reveals that digital signal processing is done on the *resultant* video signal. Thus, the digital processing in Hunt is performed *after* the image is achieved and it is performed on the video signal. But, as set forth in instant claims 1 and 12, the digital image generating means is coupled to the CCD and it generates the multiple bit digital image signals. It does not generate a video signal and then digitally process the video signal as does Hunt. As explained by appellant, at pages 12-13 of the principal brief, there is no teaching in Hunt "of the necessity or desirability of incorporating into a camera such as the Kokubo camera a digital memory upstream of the video processing analog circuitry."

Moreover, while, in our view, Hunt is lacking a teaching or suggestion of certain claimed elements which are also deficient in Kokubo, even if, arguendo, Hunt taught or suggested all that the examiner contends, the examiner has not satisfactorily explained how/why the references would have

been combined by the artisan. The mere fact that the references both relate to industrial applications of photographing items on a moving conveyor belt, is not, per se, enough. The examiner has not provided us with sufficient reason for the artisan, viewing both of these teachings, to have modified Kokubo in any manner with the teachings of Hunt. What, exactly, in Kokubo, is the examiner suggesting should be modified and why? While the principal answer is a lengthy one, in our view, the examiner never successfully comes to grips with a convincing reason to make the modifications alleged to have been obvious.

While the examiner relied on various other references for different claim limitations, since, in our view, the Yang, Nagasaki and Nishizawa references do not supply the deficiencies of the Kokubo/Hunt combination, we will not sustain any of the rejections of the claims under 35 U.S.C. § 103 based on various combinations of references.

Since each of the independent claims have, at least, one or more of the limitations discussed supra, which limitations are not seen to be taught or suggested by the various combinations of applied references, we see no need for

"beating a dead horse" by addressing other claim limitations which may not be adequately taught or suggested by the applied references.

The examiner's decision rejecting claims 1 through 6 and 8 through 20 under 35 U.S.C. 103 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)	
JERRY SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH L. DIXON Administrative Patent Judge	)	

ek/rwk

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